

## **Institutional Innovation in Apiculture**

***The Case of the Ethiopia Sustainable Agribusiness Incubator (ESAI)***



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## **Abstract**

*This paper will look into the apiculture sub sector to demonstrate to what extent changes in institutional arrangements (habits and practices) positively affect innovation. Institutions, in the context of this study, are not referring to organizations per se but to the formal and informal social rules that structure social relations. They are the hidden but also critical driving forces of the hardware, which are necessary for them to function properly. Against the backdrop of institutional traditions and habits in Ethiopia's apiculture subsector, a specific case study that reflects the recent and new institutional arrangement of actors in the apiculture sub sector was chosen. The Ethiopia Sustainable Agribusiness Incubator, a cooperative agreement that involves USAID and Precise Consult International, is the subject of interest in this article and accurately demonstrates the extent of changes introduced to traditional models and its impact on development and business. This project is a private sector led approach to bring business solutions to value chain challenges in Ethiopia. The paper describes the process the project went through to make a creative institutional arrangement within a complex socio-economic set up, and provides detailed accounts of two apiculture companies in the agribusiness incubator that were created in the process and now play important roles in the value chain.*

### **1. Institutional Innovation: the hidden but critical driving force of change**

Institutions in the context of this study are not referring to organizations *per se* but to the formal and informal social rules that structure social relations (Hodgson 2006; Ostrom 2005: 3). It is often not easy to understand the concept of an institution, which is considered the software aspect of development. Institutions are not visible or touchable unlike many of the hardware artifacts of development such as roads, schools, health centers, irrigation schemes, beehives, medicines, new crop varieties, new animal breeds, etc. Institutions rather refer to the hidden, but critical, driving forces of the hardware, or the software. In any case, the hardware can't function properly without the software. When America failed to efficiently deal with the Hurricane Katrina disaster, it was not because of lack of machinery, military transport, or other necessary equipment; it was the 'software' – or the institutional arrangements – that were the problem. The poor communication between different agencies, weak leadership and even racist

attitudes towards those affected (Herring, 2006) had a huge impact on the catastrophe. Communication, linkages, leadership and attitude make up the important aspects of institution in this particular example.

Herring (2006) gives us other examples to demonstrate to what extent institutions are important. When poor farmers in Africa want to improve their farming, it is not simply improved varieties of crops they require. Often, issues of land tenure, lack of knowledge about markets or the inability to access financial services are the real barriers. For a good education system to function, it is not only school buildings, books and computers that are essential. What really makes a difference are the incentives teachers have to make them better teachers and the attitudes parents have towards supporting their children's development. Here, Herring is referring to another set of institution aspects such as knowledge, law, market and incentives. Other institutional issues may include important aspects of a social capital such as social organization and value systems, which may include trust, respect, cooperation, confidence, pride and others.

Technological advancement in today's world tends to overshadow the importance of institutions, yet it can never replace the role of institutions. For example, development organizations in agriculture are often more concerned about the generation and dissemination of technologies than the social and traditional structures that dictate agricultural practices.

Research protocols are frequently signed to develop agricultural technologies and extension systems are designed to promote new technologies. Critical institutional issues are often undermined, while many of the problems associated with effectiveness, sustainability, equity and scale are related to institutional challenges, such as poor communication, weak linkages, undeveloped markets, inadequate incentives, mistrust and inappropriate laws/policies. The argument here is that modern societies in Ethiopia have actually become much better at technological innovation than at institutional innovation. However, issues related to environmental sustainability, social justice and

coping with climate change hinge on the potential rapid institutional transformation the country could be experiencing. Hence, institutional innovation becomes critical to the wider understanding of capacity development and its link with government (Held, 2004; Milbraith, 1989). Improving the 'software' side of how societies function is what is described as institutional innovation. Many capacity-development interventions have been driven by the needs of technological innovation rather than the needs of institutional innovation. However, the global challenges of the 21<sup>st</sup> century call for institutional innovation that entails very different dynamic relations within society. Changing institutions – whether related to societal norms and values, government policies, market incentives, political systems or organizational processes – requires the 'soft' capacities of communication, trust building, diplomacy, networking, making sense of messy social situations, political advocacy and leadership (Woodhill, 2010).

## **2. Policy overview**

Ethiopia is one of the world's oldest civilizations and is also one of today's lowest income countries. Throughout its history, the country's economy has been and still is predominantly agricultural engaging over 85% of the country's population. However, activities in the sector remain largely at subsistence level and register low productivity and output. Recognizing this, the overarching policy framework of Ethiopia's ruling regime since 1991, Agricultural Development Led Industrialization (ADLI), places the agriculture sector at the center of the country's economic stage. It advocates the sector to take a leading role in stimulating growth and development than all the other economic sectors.

In accordance with the overarching ADLI policy, Ethiopia's medium term national economic plans aims to curb the recognized challenges in the sector. The Plan for Accelerated and Sustainable Development to End Poverty (PASDEP) I and II, and the Growth and Transformation Plan One (GTP I), all aim to transition subsistence and traditional agricultural practices into modern and commercial economic activities. The

five-year GTP I envisioned doubling the average annual growth of the agriculture sector (from 8% to 14.9%). This ambitious target includes productivity increment, commercialization and market-orientation (GTP, 2010). Now that GTP 1 is finished, the government of Ethiopia has prepared and officially announced GTP 2 starting September 2015. Reports from GTP 1 indicated several milestones were achieved but agricultural production was not doubled as it was planned to have done so. Achievements in apiculture were largely in terms of increasing numbers of modern and transitional beehives.

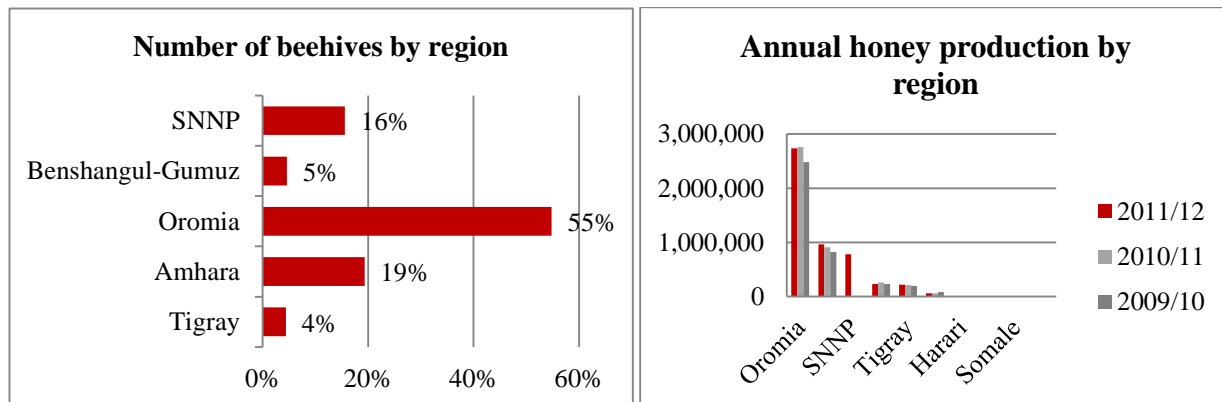
### **3. Background to the Apiculture sub sector in Ethiopia**

In terms of economic contribution, bee products mainly honey and beeswax are among the highly marketed livestock products of Ethiopia. Furthermore, in terms of exports, bee products, mainly beeswax, are among the main livestock export products of the country. Currently, Ethiopia is the 10<sup>th</sup> biggest honey producer and the 4<sup>th</sup> largest beeswax producer in the world. Recognizing this, exploring the economic potential of Ethiopian bee products, mainly honey and beeswax, is essential and worthwhile.

Ethiopia has a wide range of agro-ecological and climatic zones that supports a diverse and unique, yet natural and indigenous cultivated flora best suited for beekeeping activities. Due to this suitable natural environment a large number of honeybee colonies exist in the country. The country is estimated to have the largest bee colonies in Africa. With a suitable ecology and varying climatic conditions, Ethiopia is home to five distinct wild bee species of 10 to 12 million colonies of which 4.8 million are hived. The honeybees in Ethiopia are well distributed and adapted to the different climatic conditions. Accordingly, bee products are distributed across the different regions of Ethiopia, the most important honey producing regions are Oromia, Amhara, SNNP, Benshangul Gumuz and Tigray. These bee colonies yield an average production of 7 kg of honey per colony per year. In the Ethiopian tradition, 80-90% of this projected annual

honey production is used to produce local honey wine called 'tej' (SNV baseline survey, 2011; BAOM, SNV 2008).

According to the Agricultural sample survey (2011/12), Oromia has the largest number of beehives followed by Amhara and SNNP respectively. Similarly, in terms of annual honey production as well Oromia has the lead followed by Amhara and SNNP regions respectively.



Source: CSA, 2011/12

Jimma, Illobabor and West Wellega have been the areas of Oromia region with the highest number of hives. In Amhara region, North Gondar, East Gojam, West Gojam and South Gondar registered the highest number of hives in the same period. Kaffa and Sidama have the largest number of hives from the Southern region, while Central and Southern Tigray registered the highest number of hives from the Tigray region. From Benshangul-Gumuz region, Metekel has the largest number of hives.

At national level, the country produces about 40,000 tons of honey and 400 tons of beeswax annually. Despite its long history, large colony size and improving performance, beekeeping in Ethiopia remains underdeveloped. The knowledge and skills of Ethiopian farmers in honey production and beeswax extraction remains traditional and highly inefficient. Farmers use local knowledge and innovation to overcome local problems. They have established a system that has worked well for them for centuries. With regards to the contribution of honey towards income generation and poverty alleviation, an assessment done with selected households revealed that cash

income from sales of honey and beeswax represents a third of the total household income for rural households involved in beekeeping activities. Nevertheless, the current output level is still around 8% of the country's overall production potential. This demands interventions that combine local knowledge and practices with scientific knowledge bodies, as well as innovative institutional arrangements that trigger change in the economic front. Increasing the economic contribution of beekeeping to the Ethiopian economy also requires further upgrading and upscaling of production at critical points of the value chain (Global Development Solution, GDS, 2009).

#### **4. Study Methodology**

In studying the innovation system within the apiculture sub-sector of Ethiopia, this paper uses a case study approach. Similar to methods used by UNDP (2008) in establishing its case for inclusive businesses, and Porter and Kramer (2011) in demonstrating their case for shared value creation. This study employs the case study method. The case was selected based on the need to study a new institutional arrangement in the apiculture sub-sector that demonstrates a new learning front in development. The findings are based on real-life and practical incidents, making it easier for others to adapt the new practice quickly.

'Case connotes a spatially delimited phenomenon (a unit) observed at a single point in time or even some period of time...' (Gerring 2007: 19). Given this definition of a case, a case study is an in-depth exploration from multiple perspectives of the complexity and uniqueness of a particular project, policy, institution, program or system in a "real-life" context (Simons 2009:21). In accordance with the above definitions, the case of research in this study is the *Ethiopia Sustainable Agribusiness Incubator* (ESAI) project. The study aims at in-depth exploration of the economic interactions between actors through the steering of ESAI within the innovation system of the apiculture sub-sector.

This approach of deeper understanding, however, entails a trade-off as it does not allow for national level recommendations and inferences. Another major shortcoming of the case study approach is the possible selection bias. Factors leading to this bias are related to limitations in time, money, expertise and access. While these maybe legitimate factors in case selection, they do not provide methodological justification. Although there are shortcomings, this study conducted with project ESAI as a case study, will call attention of stakeholders to the subject and findings and will trigger further research and explorations leading to macro-level inferences. In general, this paper is an outcome of action research, which pays attention to close observations, systematic data collection, learning and reflection.

## **5. Institutional habits and practices in apiculture development and business**

This paper looks into the apiculture sub-sector to demonstrate to what extent changes in institutional arrangements (habits and practices) affect innovation positively. Certain kinds of habits and practices of farmers, researchers, extension workers, policy makers, market actors, regulatory bodies and so, define the pattern of the way business and development is planned, organized and executed, and the scale of the development outcomes. A carefully selected positive change made in the traditional habits and practices is likely to bring significant value in the overall outcome of the system. Such change could be referred to as institutional innovation and may open new windows for technological innovation and other forms of social innovations. Here the key factor is to understand the system and determine the leverage point, where introduction of a small change would bring important changes to the entire system.

The Government of Ethiopia (GoE) supports the apiculture value chain through three main streams; policy support, regulatory support and national extension support. In the Growth and Transformation Plan One (GTP I) the Government envisaged increasing number of beehives (traditional, transitional and modern), increasing annual honey and

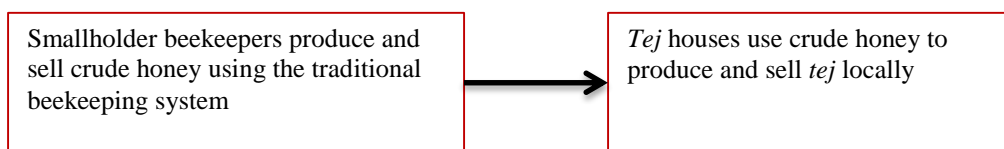


beeswax production, increasing production of queen bees (queen-rearing activity), setting up sector legal frameworks and encouraging quality and organic certifications.

In the pursuit to accomplish the ambitious national development plan, the Ethiopian government introduced proclamation no. 660/2009, or Apiculture Resources Development and Protection, to further promote growth and better exploit the apiculture resource potential of Ethiopia. The proclamation came about as a regulatory support to the apiculture sub-sector. However, despite the existence, proper design and comprehensiveness of this proclamation, there are limitations with regards to implementation. The common habits and practices of stakeholders in apiculture can be broadly grouped into three categories, based on the identity of system drivers and approaches used.

### 5.1 Local farmer(s) dominant institutional set up

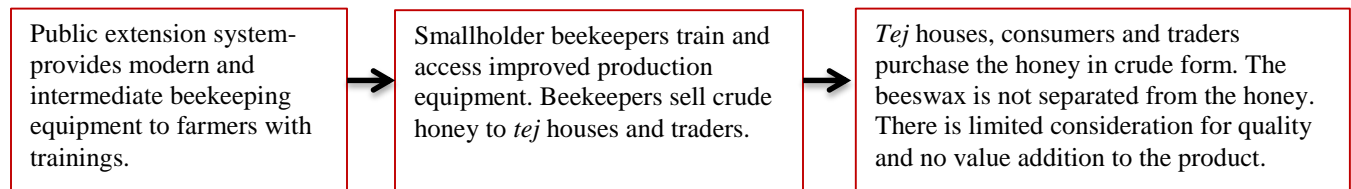
The traditional system of apiculture has existed since time immemorial in the country. The local system is credited for the domestication of bee species that can adapt to the diverse ecological context in Ethiopia. The local communities have also developed specific practices to perform important tasks such as colony trapping, colony multiplication, hive making, honey harvesting, honey based products; such as *tej* (honey wine) and *birze* (non-alcoholic honey juice). They also develop diverse applications of honey and wax for medicinal purposes. This traditional system is the most popular one in Ethiopia and it is characterized by the use of indigenous knowledge and small initial investments in the apicultural business. Beekeeping is considered a supplementary business; crop production and livestock rearing being primary businesses in rural areas of Ethiopia.



In Ethiopia, more than 95% of bee products are sold in the local market, mostly to small commercial businesses involved in the production of *tej*. In the entire process there is very little or no involvement of other stakeholders, apart from the traditional beekeepers themselves and the actors in the local market.

## 5.2 Public extension driven apicultural institutions

This institutional set up is characterized by the introduction of modern hives and transitional hives to the local system. It pays little or no attention to the local systems, and rather assumes modern apiculture technologies can change the world of smallholder farmers. Farmers are considered to be the models and are the primary target groups of the institution. Model farmers adapt new technology introduced by the extension system and are able to show good results, which other farmers could then learn from.



The Ethiopian extension system introduces modern hives to farmers through loan arrangements. However, the success rate of loan repayment is small and many of the farmers are reportedly not using the equipment for its intended purpose. In the last 40 years, the public extension system has introduced 139,682 modern hives and 81,596 transitional hives to rural areas throughout Ethiopia. Out of the total number of smallholder farmers participating in various extension packages, 13% were participants in the honey and beeswax development package of 2011-12. Tigray region had the largest number of participants (53%), followed by Amhara (33%), Oromia (9%) and SNNP (5%). Furthermore, training manuals and technology packages for commercial

beekeeping have also been produced and made available through the Ministry of Agriculture (MoA). One of the key pillars of this intervention is the training of extension workers and farmers. Extension agents are trained by the Holeta Bee Research and Training Center and are expected to train select farmers chosen by the extension programs to receive modern hives and accessories. Demonstration of modern hives and apiary management is often done at Farmer Training Centers (FTCs), and established apiaries of successful farmers are often used to train other farmers.

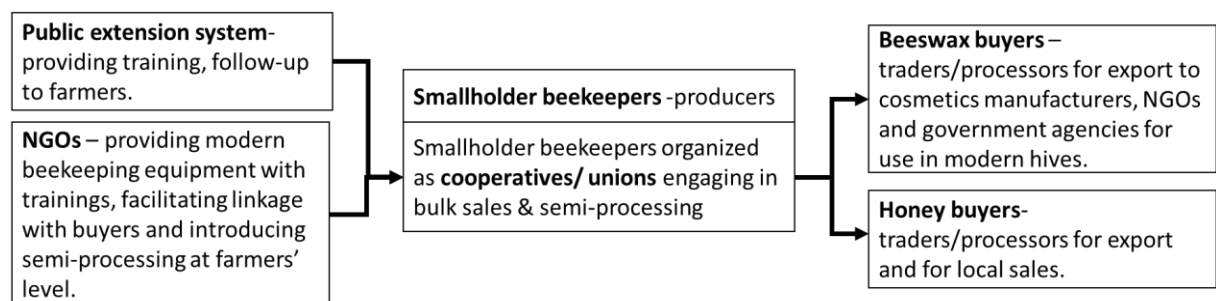
Despite the tremendous efforts of the public extension system to introduce these technologies, the impact was not that big in terms of its contribution to the economy. In this institutional arrangement, the key players are the public extension workers and model farmers. Technology pushed through training is the main mission of the extension program. Market actors are not visible in this interaction; and the lack of consideration of the market is one of the most important limiting factors to unearth the great potential of apiculture resources in Ethiopia.

### **5.3 NGO Triggered institutions**

The habits and practices in this typology is quite similar to the public extension led system but with slight differences. Essentially, the introduction of modern hives is a typical manifestation of the system. Some NGOs have made unique contributions in the apiculture development space, while others are blamed for providing hives and accessories for free; thus creating dependency of farmers on external agencies and withering away their self-confidence to strive for change. The training of farmers and extension workers and the establishment of demonstration sites are common practices of NGO led interventions in apiculture. This type of intervention is slightly better in terms of identifying market issues in the entire process.

The work of SoS Sahel in the Amhara region and in the SNNPR is an experience worth mentioning. SoS Sahel introduced quite a high number of hives to smallholder farmers

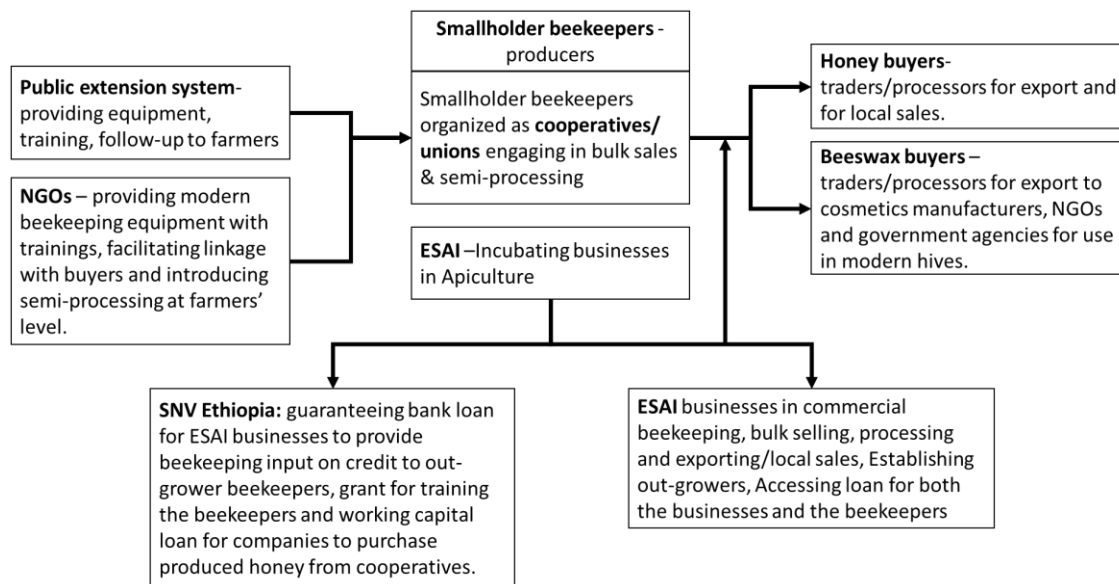
by linking them with micro finance institutions to help them buy inputs. Farmers also received intensive training on modern and transitional beehives. The support of SoS Sahel to help farmers form a strong Honey and Beeswax Producers Association is commendable. Farmers were provided support with product branding such as good packaging and labeling, which allowed them to enter the honey markets in Addis Ababa and Bahir Dar. The outcome of this experience was adapted by several NGOs. Although, some reported a number of similar results, no groundbreaking type of intervention was reported from those that adapted this model.



In this institutional arrangement, NGOs, farmers and market actors are important players. The public extension workers also participate but are not in the driver's seat. One of the limitations of this arrangement is that all players of the value chain are not considered in this model. Particularly, the system fails to identify a leverage point, which could be helpful to contribute to system level transformation. The focus was on small changes and the actors seem to remain happy with results such as empowering farmers to enter into the market in an organized way. However, honey and beeswax processors and exporters were not considered in this model. For this reason, there was not enough momentum in the system to move and shake the forward and backward linkages of the value chain. As a result, the outcomes from this kind of institutional arrangement was stagnant, showing not much progress from year to year.

## 6. The case study: Ethiopia Sustainable Agribusiness Incubator (ESAI)

ESAI is a private sector led, transformative model in apiculture. The three-year innovative project was designed to encourage, stimulate and support apiculture business innovations. ESAI is a USAID cooperative agreement project, implemented by Precise Consult International, a private company involved in strategy, finance and development advisory services in Ethiopia. The experiences of this project is used as a case study to demonstrate institutional innovation in the apiculture sub sector.



ESAI adopted a business incubation model as the strategic framework for working within the apiculture sub-sector. The project kicked-off its operation by studying the apiculture value chain inside out. Based on this study, critical intervention strategies were identified and were further considered as entry points for the project's implementation. ESAI selected incubatees (start-up businesses in apiculture) who operate as keystone enterprises such as test beds for the formation of new kinds of value addition and new models for farm to market linkages. The project tests alternative business models, discovers local economies of scale and scope, experiments with appropriate technologies that have not previously been applied in Ethiopia. ESAI is

attempting to realign government policies with sector interests. In its implementation activities, ESAI has been operating within the following environment:

### Ethiopia Sustainable Agribusiness Incubator

#### **Government (Ministry of Agriculture and regional agricultural bureaus, technology centers, research institutes)**

- Provide regulatory framework
- Provide technology development, dissemination and training

#### **Apiculture Board/ Unions/ Cooperatives/ Associations**

- Advocate for needed changes in policy environment
- Coordinate actors/activities in industry
- Facilitate access to inputs/ finance/ training

#### **Donors and Financiers (i.e. USAID-ACDI/VOCA, SNV-ASPIRE)**

- Provide guarantees/loans/grants
- Provide inputs/trainings
- Market entry facilitation

#### **Private Sector (SMEs and medium-scale processing/exporting businesses)**

- Input production/import
- Honey and beeswax production
- Processing
- Packing, transporting and marketing

Within the ecosystem presented above, the ESAI project's steering activities entail three sects:

- Deep dive apiculture value chain study
- Selection of innovative business models that are aligned with identified intervention areas in the deep dive
- Cases of four incubatees (innovative businesses) created, supported and graduated from the ESAI project

## **6.1 Deep Dive Study:**

In the undertaking of the value chain study, the ESAI team reviewed desk researches and conducted 200+ interviews with stakeholders all over Ethiopia. They also conducted international market assessments to understand the position of Ethiopia in the global market. Upon the first draft of the deep dive study, ESAI presented the study for consultation to key stakeholders in the sub-sector. Key stakeholders include Holleta Bee Research Center, Ministry of Agriculture, Ethiopian Apiculture Board, Ethiopian Honey and Beeswax Producers and Exporters Association, Netherlands Development Agency (SNV Ethiopia, ASPIRE project) and three private sector companies in the apiculture sub-sector.

Based on the comments provided and the additional insights obtained, the deep dive study of the apiculture value chain was finalized. Major challenge areas were identified and critical intervention points that would address the challenges were revealed. The final deep dive study was then shared with stakeholders and published to the public.

The identified critical problems in the value chain were:

- High cost and poor quality of modern beekeeping equipment, while traditional practice yields lower output and inferior quality
- Limited know-how of modern beekeeping, harvesting and post-harvest handling
- Fragmented output across the backyard of smallholder beekeepers all over rural Ethiopia, limited availability of bulk supply
- Side-selling and adulteration of products, contract enforcement problems between producer cooperatives and buyer processors
- Limited value addition and limited product lines development from the apiculture value chain

Recognizing these value chain challenges ESAI identified three central intervention points:

- Facilitate increased complementarity between the modern and traditional production systems
- Introduce new business models (enabling bulk supplies, developing out-grower schemes and supporting the entry of processors into high production/beekeeping regions)
- Facilitate entry into new product lines and value addition

## **6.2 Selection of Innovative Business Models:**

As a second activity, the ESAI project announced a call for application to entrepreneurs with innovative business concepts. Over 85 applications were received by the project. First, ESAI staff reviewed these new concept notes. Then, concept notes were forwarded to the apiculture sub-sector board composed of major stakeholders in the sub-sector.

Business concepts in line with identified strategic intervention points were prioritized and the entrepreneurs were invited to participate in a business plan writing workshop. Entrepreneurs prepared the first draft of their own business plan and presented it to the ESAI team. The commitment of the entrepreneurs, in addition to the innovativeness of their business idea, was taken into consideration in the selection of incubatees for the agribusiness incubation program.

Through a rigorous selection process, fourteen entrepreneurs in the apiculture subsector were welcomed into the ESAI incubation program in 2013.

<b>Entrepreneurs in apiculture</b>	<b>Location</b>	<b>Proposed business idea (model)</b>
Samuel Woldekidan	Jimma	Set up the first processing and exporting enterprise based in the highest beekeeping area in the Oromiya Regional State, Jimma Zone
Assefa S. Medhin	Ada'a	Set up the first processing enterprise producing honey and several honey products (candies and soaps made from honey).
Solomon Mulugeta	Add'a	Enterprise of 300 beekeepers organized to supply their product in bulk to Assefa S. Medhin's upcoming processing enterprise.



Simret Lulekal	Ada'a	Set up a small-scale honey and beeswax refinery unit, queen bee rearing and bee colony selling business. Enterprise working with 600 women beekeepers and supplying mainly to the local market.
Desalegn Begna	Holleta	Manufacture modern beekeeping equipment with standardized quality by a beekeeping sub-sector professional.
Hamdi Ali Abdela	Awassa	Set up the first processing and exporting enterprise based in the capital of the Southern Nations, Nationalities and Peoples Region (SNNPR), a region with a large production base. Organize producers and source from areas that have largely fragmented output across the backyards of smallholder beekeepers.
Meseret Getachew	Jimma	Commercial beekeeping a 250 ha of the promoter's coffee plantation in the Gera district of the Jimma zone in the Oromiya Regional State. The commercial beekeeping enterprise engages surrounding coffee grower beekeepers as out-growers. The farm serves as a base for bulk supply of crude honey.
Yewalashet Yigezu	Wellega	Set up the first processing and exporting enterprise based in the one of the highest beekeeping areas within the Oromiya Regional State, Wollega Zone in Nekemte.
David Mulugeta	Wellega	Commercial beekeeping on 200 ha of the promoter's coffee plantation in Anfillo district in the Wollega Zone of the Oromiya Regional State. The commercial beekeeping business engages surrounding coffee grower beekeepers as out-growers. The farm serves as a base for bulk supply of crude honey.
Tsion Abera	Wellega	Commercial beekeeping at 45 ha of the promoter's commercial farm in Menesibu district in the Wollega zone of the Oromiya Regional State.
Dehana Amdework Smallholders	North Wollo	Enterprise of 600 beekeepers organized to supply their product in bulk to processing enterprises
Haileselassie Yohannes	Sheka	Set up the first processing and exporting enterprise based in one of the highest beekeeping areas within the SNNP Regional State, Sheka zone at Masha
Selome Wassie	Addis Ababa	Enterprise supplying flavored honey mainly with infusions of various flavors in refined table honey. A business marketing to selected retail outlets and exhibitions.

Ebisie Bayisa	Washington DC	Enterprise that imports beeswax from Ethiopia and produces candles, lip balms and lotions made from natural beeswax. Products are sold at farmers' markets and health stores in Washington DC.
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The fourteen entrepreneurs listed above entered the incubation program and began turning their innovative business ideas into actual businesses. Out of these fourteen, five enterprises were not able to perform up to the expectations and requirements of the incubator (in terms of licensing and

registration, linking with producer groups, committing time and injecting sufficient capital into the new proposed project). Hence, these five enterprises were considered drop outs within the first year of operation in the incubator. The remaining, on the other hand, performed well and registered results in terms of employment creation, income generation for smallholders and revenue generation for the business.

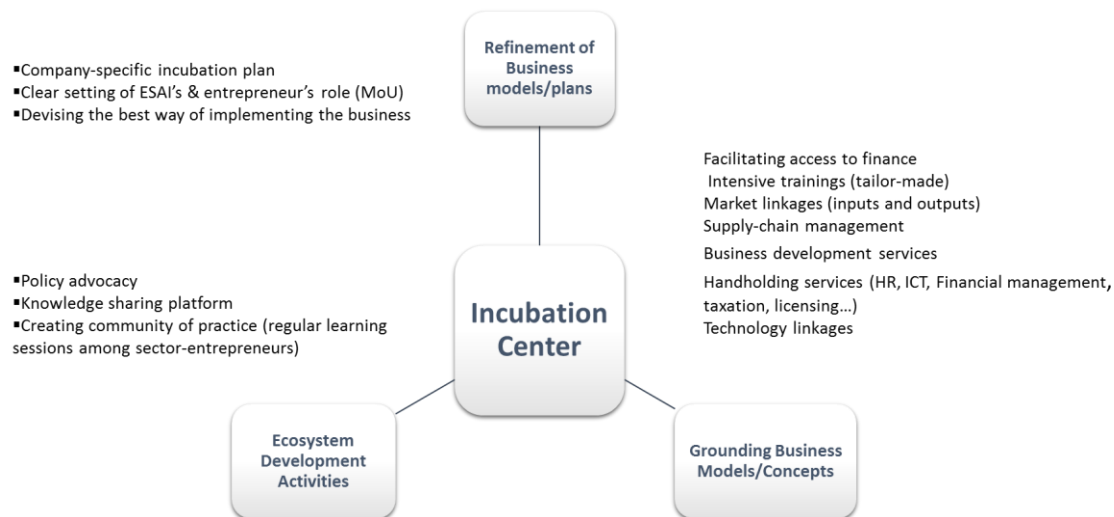
In addition to introducing new initiatives to the apiculture sector, the ESAI project also welcomed new and innovative business models from existing enterprises. Although a few of the businesses already existed, the proposed projects accepted into ESAI were completely new. Existing companies include:

<b>Entrepreneurs in apiculture</b>	<b>Location</b>	<b>Proposed Business Idea (Model)</b>
Emebet Dejene	Cheha	Source from 382 out-grower beekeepers (115 are women) in Cheha of the Gurage zone, produce candles made from beeswax and market table honey for the local market
Yirgu Gossaye	Yirgacheffe	Purchase portable honey and beeswax separating equipment and provide farm gate honey and beeswax separation for 500 smallholder beekeepers in exchange for the collection of beeswax from smallholders
Dimma Beekeeping Development and Honey Processing PLC	Adigrat	Set up 500 out-growers beekeepers in Atsbi to increase output volume of extra white honey and to introduce improved beekeeping practice for the area

The 12 projects as a whole were successfully ran in the apiculture section of the ESAI incubation program from January 2013 to March 2015. Through these business models, intervention efforts of the ESAI project in the Ethiopian apiculture value chain are provided in the following section.

### 6.3 Incubation Program

Following the welcoming of business concepts into the incubation program, ESAI delivered full-fledged business development services. The incubation services can be summarized in the diagram below:



All the business concepts that entered the incubation program received the above listed support services from the incubator. In this paper, two enterprises are further developed into case studies that describes the steering role of ESAI in the Ethiopian apiculture value chain.

#### Case 1: **YERKISHO HONEY AND WAX TRADING PLC**



Samuel Woldekidan is an entrepreneur who owns a gas station in Teppu, a coffee growing, forest covered and high potential beekeeping area in

Southwestern Ethiopia. During his frequent trip to the area for his gas station business, Samuel came to realize the immense amount of unutilized bee product outputs and the secret high potential of beekeeping in the area. He was further intrigued when he discovered the enormous untouched potential in the neighboring Jimma zone of the Oromiya region.

Despite the long existing culture of beekeeping in the region, a high number of beehives per smallholder and larger output, no value addition enterprise existed in the



**Yerkisho Honey and Wax Trading PLC is located in the Jimma Zone of the Oromiya Region.**

area. The majority of the output is sold to local honey wine shops (*tej* houses) and the relatively smaller volume of the output is collected and transported to the capital city by processors. While contemplating the idea of entering into the apiculture business, Samuel learned about a project that worked with start-ups and provided handholding services to new businesses through an agribusiness incubator. As a new businessman to the bee product

industry, Samuel saw working with the ESAI project as a golden opportunity. Samuel's business concept proposed to establish the very first honey and beeswax processing and exporting enterprise in the strategic city of Jimma (central town between Oromia and Southern regions of Ethiopia). He was accepted into the Ethiopia Sustainable Agribusiness Incubator (ESAI) project by Precise Consult International in 2013.

First, the company rented a former coffee storage warehouse in Jimma and for its processing machinery. Then ESAI linked Samuel with a local technologist who works in equipment imports and assembly. Having the rented space and the processing equipment on credit, Samuel registered his company as Yerkisho Honey and Wax

Trading PLC and signed a Memorandum of Understanding with 391 organized beekeepers in the Gera and Gomma (Agaro) woredas of Jimma zone and with 250 in Geisha woreda of Kaffa zone.

With the support of ESAI in developing his proposal, Samuel secured a capacity building grant of 300,000.00 ETB from SNV Ethiopia-ASPIRE project for the training of beekeepers on improved and modern beekeeping. Augmenting this, the company



**Production equipment procured through an input loan of 3.2 million ETB.**

also secured 3.2 million ETB input loan for the provision of modern production equipment to partner with beekeepers on a credit basis. Furthermore, for the purchase of raw products and running of operations, Yerkisho secured a working capital loan of 1.5 million ETB. All the loans were accessed by the Oromia Cooperative Bank, which has signed an agreement with SNV-ASPIRE project to finance companies in the apiculture

value chain. After starting its operations, Yerkisho made local sales of 480 quintals in 2013.

In addition to the establishment and financing activities of Yerkisho, Samuel also participated in the Biofach Trade Fair in Germany in February 2014 and February 2015 to promote his company and products. The project assisted Samuel in meeting all the requirements set by the sponsoring organization (SNV-ASPIRE) to participate in international trade fairs. Through this participation, Yerkisho was able to secure export contracts with buyers in Europe. Today, Yerkisho has championed the very first honey and beeswax processing unit in Jimma, signed an agreement for seven containers of table honey, purchased crude honey from its 670 beekeepers (partners) and is getting ready to complete its first export shipment.

## Case 2: **BABICHI AGROFORESTRY PLC**

Yewalashet Yigezu lives in Anfillo, a coffee growing and evergreen region in Western Ethiopia. Yewalashet is a coffee grower and trader. But when coffee season is over, she purchases honey from beekeepers who traditionally burn beehives and bee colonies during harvest season. In this long existing traditional practice, the home of the bees along with possible future harvests are destroyed.

As she always does in off seasons for coffee, Yewalashet comes to the capital city Addis Ababa where she learns about a call for application for start-up businesses in beekeeping and bee products processing. Precise Consult International, through its USAID cooperative agreement project called the Ethiopia Sustainable Agribusiness Incubator (ESAI), posted this call and Yewalashet was one of the first applicants.



**“Coming across the ESAI apiculture deep dive study was a milestone in my business experience.”**

**- Yehualashet Yiezu**

Yewalashet thought that with the current obsession for organic and natural honey in a country with minimal chemical usage, surely there would be numerous organic honey suppliers. But she was wrong. The deep dive apiculture value chain study from the ESAI project showed otherwise. At the face of increasing demand for natural and organic honey in the world market, Yewalashet realized that her partner beekeepers were destroying bee colonies, producing minimal output and supplying low quality bee products for low-end markets at trivial prices. She was inspired to seize the opportunity to improve the beekeeping practices of her fellow beekeepers and coffee growers to maximize productivity and profit.

This inspiration gave birth to Babichi Agroforestry PLC, a company established with a vision of upgrading beekeeping activities in Western Ethiopia. Babichi organizes beekeepers, collects crude honey in bulk from producer groups, purifies honey and beeswax and markets to both export and high-end local markets. With the technical support of Precise Consult International through the ESAI program, Babichi was registered and legally established in a year's time. The company signed a Memorandum of Understanding to work with 670 beekeepers in Lalo Asabe, 439 beekeepers in Anfillo and 130 beekeepers in Gidami woredas of the Oromia Region. In addition, Babichi also signed agreements with livestock development agencies in their respective areas to assist with the training of beekeepers and with Farm Africa (NGO) to support farmer groups purchase crude honey.

The company rented a processing and packaging facility in the city of Nekemte, Wollega Zone and signed a 10-year lease agreement. Necessary renovations and constructions were made to the facility to fit the standard requirements for a bee products processing unit, and processing machinery was ordered from a local technologist who imports and assembles equipment. Following the establishment and strategic linkage creation, Babichi secured a 447, 665.00 ETB grant fund from the SNV Ethiopia-ASPIRE project for training beekeepers on improved beekeeping skills. In addition, by using the loan guarantee facility of this project, Babichi was assisted in securing 3.35 million ETB as an input loan for the provision of modern production equipment to purchase crude honey from beekeepers on credit. With the support and business advisory services provided by ESAI, Babichi was able to obtain a working capital loan of 4 million ETB by using the sister coffee business as collateral.

Yewalashet's Babichi, which started as a small idea for change, has now championed the very first honey processing enterprise in the Wollega Zone of Western Ethiopia. The company participated at the Biofach International Organic Trade Fair in Germany in 2015 where they secured export contracts. Babichi is now preparing for its first shipment of table honey to Germany, purchased from its 670 partner beekeepers and

refined at its processing center in Wollega, Ethiopia. This intervention has exerted tremendous impacts in the supply chain activities in Wollega, and also in the Ethiopian honey and beeswax market at the international level.

## **7. Key lessons**

The new institutional model introduced through ESAI is transformative in its nature because it starts with understanding the system, identifying the key leverage points and investing in the critical areas. All of the identified components of this innovative model, have the potential to transform the entire apiculture value chain. Not to mention, several value chain players are likely to identify new business opportunities as a result of seeing critical gaps in the apiculture value chain. In this model, introducing new innovative businesses, or expanding existing businesses with innovative ideas, addresses key value chain challenges. It offers not only technical solutions (like the traditional extension approaches), but more importantly, business solutions to the value chain challenges. The main intervention in this model, or the key function of the facilitating agencies, is not to deliver technology or training to farmers, but to develop innovative business models to fix value chain problems. However, both technology and training (business and technical) are still critical factors depending on the business model, and should not be regarded as a blanket recommendation to all. This is one of the key features of the new institutional arrangement, which radically changes the equation for the conventional extension model.

The second distinctive feature is the fact that it is a private sector model. The drivers of the entire process are private companies that strive for profit. The motive of a private player is not only *for profit* but also to grow bigger in scale and operation and become competitive in domestic and international markets. This provides tremendous energy to the private players to move and shake the entire system; creating more jobs, introducing new technologies and systematically linking smallholder farmers in



Ethiopia to international markets. For example, the private players in this case study (the processors and exporters) not only invest in the business they operate but also in the supply chain to make sure enough and good quality supplies are secured sustainably. In the institutional models discussed above, the investment to improve the supply chain comes either from the public extension or NGOs, resulting in lower responsiveness from farmers to pay back loans and continue making investments in their business. Therefore, the guarantee to access markets is not promising because very little or no linkage is made with key market actors.

More attention is simply given to boost production by improving technological processes. The reward to producers is more meaningful when there's an increase in production and productivity is stimulated and triggered by innovative business models, not necessarily only technology. Production triggered by technology curbs when the market does not respond well to it. In fact, it can have a negative reversal effect if farmers are not able to sell their products and generate income. In the new introduced model, the loan taken out by farmers is expected to be paid in kind (crude honey), which is much easier for farmers instead of repaying in cash.

The combination of involving private sector players and creating links between important actors in the apiculture value chain makes this innovative model successful and effective. Although no new actors were created per se, the new institutional arrangement successfully made sense of the complex socio economic set up of the Ethiopian apiculture value chain. Again, the linkages in the conventional extension model are restricted to traditional players, including research, extension workers and farmers. In contrast, the ESAI project involves more actors such as: commercial banks, development projects, capital goods leasing organizations, agricultural bureaus, private sector entities, international market actors, sectoral associations, beekeepers research organizations, trainers, NGOs, policy shapers and advisors in business and financial management. All these actors have a fair share they contribute to the value chain. However, the linkages with these organizations did not take place overnight. It was rather a product of continuous learning and action. In the learning-action-learning

continuum, new organizations come into the picture and less important linkages receive little attention. Also in this continuum, new advocacy agendas are entertained, new opportunities are grabbed by private sector actors and new insights and information are shared among players. The ESAI team identified any opportunities that would contribute to the success of the project. Finally ESAI managed to steer the collaboration of all these stakeholders towards curbing value chain challenges. The new role of ESAI was to facilitate innovation, and innovation in this context is the introduction of new ways of doing things, which requires the participation of new actors with new roles in a new institutional set up.

## **8. Conclusions and Recommendations**

In its three-year project lifetime, ESAI was successful in incubating more than 14 companies in apiculture. Most of them started their businesses with almost nothing or very little resources, but their great ideas and passion drove the success of their businesses. The incubated companies of ESAI now play significant roles in the apiculture value chain and have created jobs for a significant number of people, especially farmers. Essentially, smallholder farmers were the ones who benefited the most from the ESAI project.

This is new way of thinking underscores the livelihoods of farmers, and suggests that their livelihoods could not necessarily be improved by investing solely in production, but in the entire value chain with due consideration to market players. Any single investment made to improve market structures will have tremendous impact on the livelihood of smallholder farmers. This project, unlike the traditional extension model, invests in private sector players who have the power to make the market functional and robust.

Nevertheless, this model also experienced tremendous challenges, the main one being access to finance. With the generous investments of SNV-Ethiopia in the financial sector (banks), the start-up companies of ESAI were able to access finance much easier than other entrepreneurs in Ethiopia. However, lack of access to finance requires more innovation in the financial sector. ESAI looked at a key approach and explored the opportunities that arise when large private sector actors are interested in financing the entire value chain for the shared benefits of everyone in the system. Therefore, this paper does not argue that the role of the state should alter in providing extension services to smallholder farmers, but instead suggests a mix of other approaches, like the private sector model discussed in this paper. Not to mention that these approaches should be further tested and the government should be open to learn from such experiences. The proposed private sector model could succeed with the policy support of the state, particularly in easing access to financial resources and improving trade and tax legislations and practices.

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